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AN ADDRESS.

On the cultivation of the Grape Vine, delivered before the Detroit Horticultural Society, September 12th 1848.

By the Editor.

It is highly gratifying to witness the increased interest which has been awakened of late, upon the subject of agricultural and horticultural improvement—a subject which is engrossing the attention and tasking the energies of some of the most gifted minds in both Europe and America. And horticulture as a distinct department, is becoming a subject of engrossing interest, and presents a field of interesting investigation and research—a field in the exploration of which much talent is engaged—and, it is a pleasant and delightful field, and one which yields rich returns for the labor bestowed.

The subject which I have chosen as the theme of my remarks this evening, is that of the history, geography and cultivation of the grape vine. And I regret that amid other pressing engagements, I have not been able to bestow that attention upon the subject which its merits demand.

The grape vine is a deciduous tree, with an irregular, contorted trunk, and long flexible branches, and either trails on the ground, or clinging by its tendrils to the branches of shrubs and trees, lifts itself up on high, climbing and overrunning the tops of the tallest trees of the forest. Its leaves are large, smooth, or downy, serrated, lobed, or entire. Its blossoms and its fruit hang in clusters, and proceed only from wood of the same year. The berries are round or oblong, and their color various, as white, yellow, red, blue, purple and black. The pulp very juicy, rich, sacharine, and of delicious flavor, containing from one or two to four or five seeds. Two varieties, however, the Ascalon or Corinth, and the Sultana, contain no seeds.

The history of the grape extends far back into the centuries of the past. Far anterior to the planting of orchards of the various other kinds of fruit now in general use, the fruit of the vine was a common luxury in the East. The scriptures are full of allusions to the vine and the fruit of the vine. Some of the most beautiful imagery which adorns the sacred page, was drawn from the vineyards which covered the hill sides of Palestine. As an emblem of prosperity and of plenty, the vine is frequently pressed into service by the sacred writers. Those were palmy days in Israel, when "every man could sit under his own vine and under his own fig tree." And who has not admired the pictorial representation of the two spies, returning from the promised land, three thousand three hundred years ago, bearing upon their shoulders a pole, bending beneath the burden of the immense clusters of grapes which they had brought away as an evidence of the fruitfulness of the land?

The first Horticulturists whom we read of, were the parents of our race. The *mother*, no less than the *father* of mankind, was a horticulturist. And in that garden which was replenished 'with every tree which was pleasant to the sight and good for food,' is it to be supposed, for a moment, that the grape vine was not to be found? Says our great epic poet, in describing the rural scenery of paradise,

> "Another side, umbrageous grots and caves
> Of cool recess, oe'r which the mantling vine
> Lays forth her purple grape, and gently creeps
> Luxuriant."

This is poetry, to be sure, and I have little doubt, that it is substantially fact.

But to return to the regions of authentic history; as we descend along the lapse of ages, the high distinction which was bestowed upon the fruit of the vine, as one of the choicest luxuries of life, obtrudes itself upon our notice at every step. Its praises are recorded in both Greek and Roman story. Indeed one of the most admired of Latin poets would seem to have drawn his inspirations almost entirely from the juice of the grape, insomuch, that the inimitable beauties of his classic page, but poorly atone for its corrupting, bacchanalian influence upon the youthful mind. His odes, which were written two thousand years ago, and constitute a text book in all our colleges, for this very reason, together with another which might be mentioned are absolutely unfit to be put into the hands of our youth; and to undertake the work of expurgation, would be to demolish the whole structure. All this goes to show to what extent the cultivation of the vine was carried in those days.

It may be remarked here, however, that the grape vine was not indigenous at Rome, nor indeed in any part of Europe. Its origin has been traced to Persia. The best grapes in the world are said to be produced along the range of mountains which stretch diagonally from the Persian gulph to the Caspian Sea. And it has struck me as an interesting fact, that the origin

of many of the most delicious fruits of modern times, has been traced to that country—to the very neighborhood of the garden of Eden. From Persia and Syria, the vine passed into Egypt, Greece, Sicily, Rome, Spain and Gaul, where it was cultivated long anterior to its introduction into Britain, which did not take place till about the time of the commencement of the christian era. From that time, however, the cultivation of the vine received increased attention in that Island, insomuch, that in the laws of that most illustrious of all English monarchs, the great Alfred, honorable mention is made of it. In the eight and ninth centuries, the whole south of England appears to have abounded in vineyards, to as great an extent, as do the hill sides of France at the present day. What cause contributed to the decline of grape husbandry in that country, does not so clearly appear.

The grape vine, being a native of temperate regions, yields no fruit in the tropics, where it cannot enjoy the rest of winter. At Bombay, however the inhabitants contrive, by artificial means, to give it a season of repose, and after a slumber of six weeks, it awakes to fruitfulness.

Although as I remarked, it is not indigenous in Europe, it is cultivated in every part of it, from the Mediterranean to the latitude of 51 degress North. It is also extensively cultivated in South Africa, in the African Isles of the Atlantic, in Egypt, in Greece, in Barbary and in most parts of Asia adapted to its culture.

In the United States, by reason of the fickleness of our climate, or for some other cause, the European varieties have not hitherto been successfully cultivated in the open air. We have, however, native American varieties, which in an improved state, are but little inferior to the European, and may yet be quite equal to them, and which are quite at home in our climate. Of all parts of our country, however, Texas seems to be most congenial to the grape. Edwards, in his history of that newly acquired section of our country, says, "of all the countries I have ever seen for producing the grape vine, Texas excels. The variety of kinds, and the quality of these kinds, are by far the most numerous and best, I have ever tasted. These native grapes are found growing luxuriantly in all quarters, while those in Arkansas and Louisiana, owing to the greater humidity of the atmosphere in those regions, are comparatively acid, and liable to untimely blights."

In the last report of the commissioner of patents, we find a communication from Dr. Stewart of Texas, giving an account of one of the numerous varieties of the wild grapes of Texas, which he denominates "the great mustang grape," which he says grows luxuriantly, without cultivation, and in great perfection, in every part of Texas, and upon every variety of soil, overrunning both the lowly shrub and the largest trees, and covering them all over with one unbroken surface of vine leaf. The fruit he describes as remarkably large, and of fine flavor. A French wine maker and vineyardist, has pronounced it the genuine port wine grape, of superior quality and yield, the wine from it being in his opinion, the genuine port wine.

In most other parts of our country the native grape may be cultivated with success.

The congeniality of our soil and climate to the native American grape vine, would seem to be manifest from the luxuriance with which it grows, and the immense size to which it sometimes attains. There are vines on the banks of the Ohio which measure two feet in circumference, and are two hundred feet long, and there is one in Burlington N. Jersey, which measures six feet and one inch in circumference three feet from the ground, and overruns the tops of four large trees. It has stood there, the wonder of every beholder, from time immemorial. —And that the foreign varieties will yet be acclimated, and cultivated in our country, with success, without artificial protection, we have little doubt. Indeed there have been instances of such success already, sufficient to encourage further trials.

The grape vine is no less remarkable for its long life, than for the size to which it sometimes attains, there being instances on record, of its having lived and flourished six hundred years, and how much longer no mortal can tell. There are said to be vines in Burgundy at the present day which are four hundred years old.

The wood of the grape vine, is regarded as very durable, as it might be expected to be, from its slow growth and long life. It is also regarded as very valuable, and is only used in the manufacture of choice articles of furniture.

The *uses* to which the fruit of the vine are devoted, are various. As a dessert fruit for the table, it is unsurpassed. In a dried state, it forms the raisin of commerce. In the form of a preserve, it is also highly esteemed. The unfermented juice, boiled to the consistence of honey, is exceedingly delicious to the taste, and in Mahomedan countries, as also in many parts of Europe, it is used as butter or honey is used. A beverage called Sherbet, which is made of the unfermented juice of the grape mixed with water, sugar and spices, constitutes a cooling and wholesome drink of the Mahomedans, who, by the way, are forbidden the use of the fermented juice of the grape, which is so common in this and other most christian countries.

Indeed the great use to which this delicious fruit has been applied, has been the conversion of its juice, by fermentation, into an intoxicating beverage. The idea, that the juice of the grape cannot be preserved without fermentation, is preposterous, all that is necessary to this end being to keep it below the temperature at which fermentation takes place, until the matters which *cause* fermentation, have subsided into sediment.

These matters may also be precipitated by artificial means. Had mankind been as desirous to preserve this delicious beverage in its pure, unfermented state, as they have been to gratify a depraved appetite, they would have found no difficulty on the subject.

The unfermented juice of the grape, is found by chemical analysis, to consist of water, sugar, tartaric acid, and mucilage. After having passed through the process of fermentation, it is found to contain water, alcohol, sugar, tartaric acid,, malic acid, with tannin and a volatite oil.

The grape requires a light, porous, deep, and rich soil, with warm exposure. On this subject we may take lessons from nature. On all rich, alluvial bottom lands,—wherever we find the lofty poplar, the majestic elm, the towering hackberry, and the stately button wood, or sycamore, with an undergrowth of the hazel and the paw paw, there will be found our native grape vine, luxuriating, and running rampant over the tops of these giants of the forest; and the more nearly we can imitate such lands by artificial appliances, the better for our purpose. Our native vines, however, will do very well in almost any ordinary soil. But not so with foreign varieties. If the soil be light, they dwindle; if it be heavy, that is argillaceous, or clayey, the fruit becomes gross or watery. The same effect is produced by the application of too strong manures—and wine-makers frequently find it necessary to add sugar to the juice of the grape to facilitate fermentation, and make what they call good wine.

The manures adapted to the vine, are various. There should always be a liberal application of well rotted manure, and occasionally a dressing of lime, is highly recommended. Bone dust, horn shavings and hair constitute a good manure. Some experiments with potash as a manure have recently been tried with remarkable results, and other experiments with common wood ashes have been attended with equally beneficial results. Nothing is better than the trimmings of the vine itself, as far as they will go.

The vine is generally propagated by cuttings, of two or three eyes each, cut just below the lower eye, and inserted in the ground, so as to leave one eye above the surface, and about six feet apart. It may also be propagated by grafting at the root by the common mode of cleft grafting.

The *productiveness* of the grape vine depends not a little upon training and pruning. In *training*, the main point is, to induce from the main stock the greatest possible number of bearing shoots. It is a law of vegatable physiology, that the flow of sap is rapid in proportion as it ascends vertically, or directly upward, and *vice versa*, slow in proportion as its direction is downward. And it seems to be a law of vine physiology, that bearing shoots will put out along the parent stem in proportion to the tardiness with which the sap can be made to loiter in its course. Hence it is desirable, not only that the main trunk should be diverted from an upright position, but made to grow in as serpentine a state as possible. In some of the Boston vineries it is customary to train the vines around a pole until they become conformed to that position, and then disengage them, when they are left in a perfect coil, and the result is the production of bearing shoots at every coil, and a prodigious burden of fruit.

In *pruning*, the great object is to prevent the accumulation of superabundant and useless wood, as the wood never bears but once, that the nutriment may not be diverted from the fruit bearing portion of the vine. There are, however a great variety of opinions as to the extent to which pruning should be carried.

There is a difference to be observed, however, between the native and foreign grape, the former requiring much less pruning, and a much wider range than the latter. Indeed it is the only grape which can be cultivated with success in this country in the open air at the present. The numerous flourishing vineyards of America consist entirely of the native grape. These vines are extraordinary for their vigorous and luxuriant growth, and cannot be restrained as the foreign vine can, producing with moderate pruning, enormous crops.

There is much reason in the practice of pruning off the ends of the vine (of the bearing shoots) above and near to the young fruit, when about half grown. By this means the nutriment which would otherwise go to the formation of wood, is made available in the organization of the fruit, which will thus attain to a much larger size. It also leaves the clusters exposed to the influence of the sun, which improves the fruit in quality. This is a season of the year too when the vine does not bleed upon being pruned; and it is thus kept within moderate bounds.

Downing, however, advises, that only the tip ends of the shoots be taken off, and that all the leaves be spared, on account of the important functions they perform in the work of assimilation, constituting as they do, the laboratory in which the juices undergo those chemical transformations which are essential to prepare them for incorporation in the living structure.

Late in autumn, just as the leaves are falling, has been recommended by some, as the most proper time for the annual pruning. The reason assigned in favor of this particular, time is, that no more nutriment being required after this time, for the formation of new wood, it accumulates in the pores and interstices of the wood already formed, to be appropriated to the next season's growth, and if a portion be pruned off, the nutriment, which would otherwise, have been distributed throughout the whole, will all be accumulated and stored in the parts which

remain. The effect of this accumulation upon the growth and production of the shoots the next season, as compared with vines pruned at other seasons of the year, is said to be quite visible.

"As the sole object in pruning a vine, is to increase its fertility, the best way to accomplish this," says Mr. Hoare, in his celebrated treatise on this subject, "is to leave a sufficient number of bearing shoots, on the least possible proportionate quantity of old wood."

The vine may be trained upon either an upright or horizontal trellis or even upon stakes. An upright trellis should not be more than eight feet high.

Almost the only disease to which the native grape vine is subject, is the mildew, and this may easily be prevented by the renewal system of triming, or never allowing the vine to bear more than two years on spurs from the same old wood. Powdering with flower of sulphur is an effectual remedy for the disease, when it makes its appearance. The mildew which is so universally fatal to foreign varieties has, in some instances been thought to be prevented by the use of ashes as a manure.

On the score of profit, the vine culture is not behind that of any other plant. The covered vinery of Nicholas Biddle, near Philadelphia, fifteen hundred feet long, yielded fruit to the value of three thousand dollars to every one hundred feet, making forty-five thousand dollars in all. The importations of grapes from abroad dried and fresh, amount to millions annually, and these might all be supplied from our own vineries.

Among the best foreign varieties are the Black Hamburgh, the Black Prince, the Espione, Black Muscadine, Miller's Burgundy, Claret, black, grizly, and white Frontignac, White Muscadine, Malmsey Muscadine, White Sweet Water, and Summer Sweet Water.

Of the American varieties the Isabella, the Catawba, and Alexander are considered the best for this climate.

In the field the native grape may be cultivated in rows as we cultivate Indian corn, with the plow, cultivator &c. It does not require even as much cultivation as Indian corn, and instead of its being necessary to renew and re-plant every year, the same plants will last for many generations of men.

How surprising then is it, that any family should be willing to be without this luxury, when it can be had at so cheap a rate? Truly marvellous is it, that a plant of such quickness of growth, and which will live to an age so great as to be unknown, which is almost totally exempt from all those adverse contingencies which blight and diminish the produce of other fruit bearing trees, which is of such astonishing vegetative power, and such wonderful fertility, and whose fruit is so delicious, applicable to so many purposes, and agreeable to all palates—marvellous indeed is it, that such a plant should not be deemed a necessary appendage of every homestead and be made subsidiary to the enjoyments of every family circle.

From the New York Transactions.

Eradicating Canada Thistles.

The Canada thistle has but two ways of propagating itself, or of being propagated. One is from the seed, which it produces in abundance; and being attached to a downy pappus, they are hurled over the fields and high in the air, by every breeze of wind, and are precipitated to the ground during the falling of rain, or by coming in contact with the twigs of the forest trees, and thereby being detached from their wings. Wherever they fall, if the soil is favorable they immediately vegetate; if not, they will remain for years unchanged. By this means, all the woodland in this vicinity becomes seeded with the Canada thistles; and as soon as it is cleared the seeds germinate, and take possession of the whole soil, if the prescriptions which I shall give are not adhered to, to prevent it.

The seed is carried many times by birds. And as they have the power of disgorging the contents of the stomach, when they please, they thus drop a great many seeds in old rotten stumps and in the dirt, where they are accustomed to roll. In all such places they are sure to vegetate.

The seed is carried many times with hay and grain into the barn. Afterward it finds its way into the manure and thence into the field. And as the germ is enveloped in a tough skin, I have known them to remain ten years in the soil before they germinated.

The second mode of propagating is by stolens which it sends out in all lateral directions. At the distance of every few inches, these stolens send up a new stem, and thus acquire new strength to push forward more rapidly, until every vegetable which is not more hardy than itself is completely eradicated from the soil. These stolens, or roots, have substance in themselves, like a potatoe, to send out shoots; therefore, by plowing them, cutting the roots to pieces only *occasionally* during the year, assists the growth, instead of effecting their eradication. In light and friable soils, they increase with amazing rapidity. Some school boys in this vicinity dug a root from the sand bank about four rods in length with stems about every six inches.

As we have now noticed the habits and modes of propagating, I shall speak of my modus operandi for its extermination. And in the first place, it is important to check its propagation. When this is done, we have taken one very effectual step towards its totat eradication.

I suffer none to go to seed; therefore I check its propagotion from the seed which would have grown on my soil. But there are scores of mis-

erable farmers who suffer acres of them to grow from one year to another unmolested; and by this means the timber land becomes seeded with Canada thistles, and as soon as the timber is cut off, and the rays of the sun warm the soil, we see Canada thistles springing up. But these plants, if cut off with a hoe before they send forth stolens, may be killed as easy as a corn plant. To prevent the seed germinating so quickly, on such land, two or three years before I design to cut off the timber, I sow grass seed in the woods at the rate of half a bushel to the acre. This will form a sward in which the seed will not so readily vegetate. (Perhaps some may think that grass seed will not grow in the woods; but let the faithless try it, and wait one year for the result.) Should any germinate on this sward, one clip with the hoe will use them up forever.

Wherever Canada thistles have taken possession of land, which I do not wish to plow at present, or on land which is filled with solid stumps, roots and stones, which cannot all be plowed up deep, I mow them close to the ground as soon in the season as they are high enough. I am fully satisfied that it is far better to mow them when they are about six inches high, than to suffer them to remain until they are nearly ready to blossom. My reason for this treatment is plausible, I think. If the stems are permitted to get a great growth, the stolens will increase in proportion. But if the stem is kept down, the roots will discontinue to spread; and, therefore, the thistles are kept on a smaller compass of land. But if they are cut just before they blossom, the effect upon the root immediately connected with the large stem is more fatal; whereas the stolens, on the border of the patch of thistles, will suffer little or no injury by the cutting of the parent stem, and will send up new stems and push forward other stolens about as rapidly as if the old stems had not been cut. Now by keeping the top or stem cut down, often the extension of the stolens is greatly retarded; and if the top is cut a few times close to the ground, the stolens cease entirely to grow. Experience has satisfied me that once mowing in the former part of the season checks its propagation by stolens more than two mowings afterwards.

On such land, and in the nooks of fences, along stone walls, if the patches are small, I use the hoe to them.

(*Remainder in next No.*)

Iron State.—Missouri will one day outstrip Pennsylvania, and probably all the other States in the production of iron. The iron mountains are estimated to contain six hundred millions of tons of ore, which will yield from 50 to 60 per cent of metal. Coal can be had for three cents per bushel, and when railroads become established, so as to make transportation cheap, she will supply the world with iron, *and more too.*

Butter for the Navy.

I received a day or two since, the following letter written by Mr. J. J. Hawley, of Binghampton, which I endeavored to obtain previous to the publication of the transactions of the New York State Agricultural Society for 1847. The facts are important, and if anything were wanting to make the proof complete, as to the capability of a great portion of our state for supplying butter, that will stand the test of tropical climates, the observations communicated by Mr. Hawley are abundant.

B. P. J.

Agricultural Rooms,
Albany, Aug. 2d, 184g.

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"The idea that no butter made out of Orange county, will 'resist the action of tropicel climates and preserve its qualities for years,' is an utter absurdity. I think that not one third of the butter sold in market, as 'Orange county,' is made in that locality. That county has, during ten years past, sent out hundreds of emigrants to the counties of Sullivan, Delaware, Chenango, Broome, Tioga, Tompkins, and Chemung, and perhaps others, in the state of New York, who have continued the manufacture of butter for market, and who, at the end of each season, have been in the habit of transporting their butter in wagons across the country to the different points of shipment, in Orange county, and there shipping it as 'Orange county.' Many of these persons had, for years before emigrating, regular purchasers in N. York for their butter, who, it was understood, were to take their product each year when made, and pay the highest maket price for it. These relations were, in many instances, continued for many years previous to their emigrating from Orange county, and many now continue them without the least objection being made to the quality of the butter.

"The term, 'Orange county,' seems to be misunderstood. It does not mean (as I understand it,) the locality where made, but a peculiar method of manufacture. The neatness and cleanliness of everything about the dairies, the churning of the *milk*, instead of the cream, and the attention to the quality and quantity of salt used, are their principal peculiarities. The churning of milk, I deem essential to butter intended for long voyages. It gives it a peculiar firmness and fineness of texture and waxlike appearance when fractured, which, butter made by churning the cream, seldom or never has. These peculiarities can generally be detected by the eye. There is also a cream-like flavor to milk churned butter, which I have never found in butter manufactured in a different manner.

"I believe the highest price paid for dairies in New York, for several years past, has been paid for several daries from Chemung county. Being at the table of a well known gourmand,

in New York, in the spring of 1847, I remarked the very fine quality of the butter; he replied that such butter could not be made out of Orange county. The conversation continued till, finally, the original firkin was brought up, when I found it was branded *John Holbert* (premium.) Mr. Holbert resides in Chemung county, and took the first premium at the State fair at Saratoga, for the best butter made in June. This gentleman told me, he had his supply of butter of this dairy for several years, at an extra price of 33 cents per pound, of a particular grocer, who alone sold it.

"The opinion of the gentleman, who has the charge of the butter department of the United States Navy, 'that no butter, made out of Orange county, will resist the action of tropical climates,' I know to be erroneous. A dairy, made in this county (Broome,) has been sent abroad much of the time for ten years past. In 1836, it was sold in St. Croix, to the government, for 75 cents per pound. In 1840 it was sold in New Bedford, and went a whaling voyage. I saw some of it after the expiration of nearly four years from its manufacture, *as sweet, and in as good condition*, as when made. The same dairy has since been sold in New Orleans, in Natchez, and Mobile, and there has never been any complaint as to its quality. I shipped some butter that was the product of this county, to Canton, in 1846, which, under very disadvantageous circumstances, opened as fresh as when made, and proved so good, that the shippers have each year since applied to me for butter, for cabin stores for their ships.

"The emigrants from Orange county, before alluded to, all agree in opinion, that as good butter can be made in their new localities, as in Orange county. Minisink is cited, in the circular, as being the locality producing the best butter in Orange county. A Minisink dairy woman, in this vicinity, who had the reputation for many years of being the best in that town, made her first dairy here, of about 60 firkins, last season, and says it was the best she ever made. All the Orange county emigrants agree in opinion (and many of them are persons of much experience and close observation in their business,) that in favorable situations, they can produce as much butter, and of as good quality, as in Orange county."

New Mode of Grafting.—In some of the high winds, early in June last, I had some pear grafts broken off, which had been inserted a year before, and were of strong growth.—Wishing to preserve the kind, it occurred to me that it was possible to do so by cutting off the short branches from the main branch; and using them as scions. These scions were from an inch to three in length, and were cut out of the main branch in the same way as in budding, and were grafted the same as in T. budding; being carefully tied with matting. The stocks in which they were engrafted, were cut off a little above the place of insertion.

The result of this experiment has been highly satisfactory, for not one of the scions failed; but all commenced growing in ten or twelve days and grew from two to three feet in the course of the season.

I have tried various other methods of grafting and budding, but never with as good success as in the manner here described.—*Farmer and Mechanic.*

See to your Scions.—Scions of fruit trees require attention. In some cases they grow slowly, owing to a large quantity of suckers which take nearly all the support yielded from the stock. It is not best generally to break off all the suckers, as they result from an effort of nature to replenish the lost top, and if all the suckers are broken off, it may injure the stem and root, as the scions cannot at once furnish foliage sufficient for the tree.

But the great growth of suckers which often cover the scion and retard its growth should be checked, to give the scions a chance. Some scions remain almost stationary through the season, from the great growth of suckers, when a little attention would have given them a start, and they would have become vigorous shoots.—*Farmer and Mechanic.*

The Pitcher Plant.—The plant abounds in the stony and sterile parts of the island of Java, from which, were it not for this vegetable wonder, small birds and quadrupeds would be forced to migrate in quest of water. At the foot stalk of each leaf is a bag shaped exactly like a pitcher furnished with a lid, and having a kind of hinge that passes over the handle of the pitcher, and connects it with the leaf. This hinge is a strong fibre, which contracts in showery weather, and when the dew falls. Numerous little goblets filled with sweet fresh water are thus held forth and afford a delicious draught to the tiny animals that climb their branches, and to a great variety of winged visitants. But no sooner has the cloud passed by, and the warm sun shone forth, than the heated fibres begin to expand, and closes the goblet so firmly as to prevent evaporation, precluding a further supply till called for by the wants of another day. The beautiful and perfect provision of nature would afford a fine theme for a Thomson or a Wordsworth, and would afford an illustration of the designs of Providence, such as Paley would have delighted to press into his service.—*Far. and Mechanic.*

We learn, says the Cincinnati Gazette, that a benevolent gentleman of Cincinnati offers to Mr. David Christy, agent of the American Colonization Society, for Ohio, the sum of *two thousand dollars*, for the purchase of a portion

of the African coast, outside the present limits of Liberia, to be paid as soon as the necessary arrangements can be made.

His design is to offer the territory to the colored people of Ohio, Indiana, and Illinois, for their acceptance, upon which to establish a *new state*, in connection with the Republic of Liberia. The agent at Washington, the Rev. Wm. M'Lain, recommends that the purchase be made northwest of Liberia, so as to include the Gallinas, and those other "darkest dens of the slave trade. This purchase would embrace the coast between the Republic and Sierra Leone, and forever banish the slave trade from that region.

More facts about Liming Land.—Barren sandy soils often admit of profitable cultivation after lime has been added; and clay soils, in which little or no lime can be detected, are often entirely changed by the addition of lime. So, also, it may usually be laid with profit upon soils formed from decaying granite, while its action is frequently less sensible when applied to soils of decayed trap. This is chiefly because the granite contains little naturally, while the trap rocks, for the most part, abound with it. —*Professor Johnston.*

New Invention.—An acquaintance of ours in this city, who is quite a Bee-fancier, and has closely observed and studied their habits for several years, placed a new swarm in a hive of his own construction on the 25th of June last. This hive is made to conform to the natural habits of the insect in its wild state. It is of the usual form, but *closed at the bottom* with a close fitting lid, covered with wire-cloth, about eight meshes to the inch. This allows all the dirt and chips of comb made by the bees to sift through, and admit sufficient air for ventilation. It is hung on butts, and can be opened to brush off any dead bees, or any other substance too large to fall through it. Near the top, directly over the drawers, is an inch augur hole, for the passage of the "workers." This aperture being at the *top* of the swarms, has always a cluster of busy bees about it, so that no miller can enter; and as there is no other mode of ingress our friend thinks that the hives may be kept from worms, which are the great enemy of the apiary. Nothing larger than an *ant* can go through the wire bottom, and they are easily kept away by salt. The swarm in the hive is the most busy its owner ever witnessed; and as evidence of this, he finds the hives on the tenth day *two-thirds* full of comb—nearly double what is usual for so late a swarm.—[*Norwich (Ct.) News.*

Lawful Enchantment.—Furius Cresenius, an emancipated Roman slave, having obtained from his very small estate much larger crops than his more wealthy neighbors from their vast domains they became so envious, that they charged him with employing enchantment, to attract into his grounds the produce of their fields. Having been summoned by Spurius Albinis, and being fearful of condemnation, he introduced into the forum, as the tribes prepared to vote, his robust and well clad family, and his agricultural implements, his heavy mattocks, his ingeniously constructed plows, and his well fed oxen, and then exclaimed:—"Behold! Roman citizens, my magic, but I am still unable to show you or to bring into the market place, my studies, my constant vigilance, my fatiguing labors." Scarcely had he concluded when he was absolved by public acclamation.

It is in enterprise, study, unremitting study, vigilance and industry, more than in money that the mystery of great crops and successful husbandry is involved.—*Southern Cultivator.*

Salt as a Preventive of Rust.—Sir *John Sinclair*, one of the best agricultural writers that England has ever produced, has the following remarks upon the subject:

"*It (Salt) has a tendency to prevent Rust or Blight in Wheat.*—In the course of a most extensive inquiry into the causes of the rust or blight in wheat, and the means of its prevention it appeared that Mr. Sickler, a farmer in Cornwall, was accustomed to manure his turnip land with the refuse salt from the Pilchard fishery; and that any ground thus treated, *was never liable to the rust or blight*, though it infested all the neighborhood."

"This important circumstance is confirmed in a recent communication to the author, from the Rev. Robert Hoblyn. He used 1 ton of old salt, with 1 ton of fresh fish, mixed with earth and from 20 to 30 tons of sea sand, and his crops, he states, were always good, *and never infested with rust.*"

"It is probable that the salt is the only article in this compost that could be of material service in preventing the rust, by its checking putrefaction, the result of too frequent a repetition of corrupted manures. It is well known that the rust does not attack plants in a state of perfect health. Its general cause is, the overfullness, or over-luxuriance of the plant, from its being glutted with rank and unwholesome food."

Soap as a Manure.—T. Dalton, a silk dyer says, in the London Agricultural Gazette, that he uses 15 cwt. of soap weekly, to discharge the oily matter from the silk, and forming of itself a kind of soap, the whole of which yields from four to six thousand gallons of strong soap suds per week. This he has lately applied to his farm, and "its effects are most extraordinary." It has been used only one season, and its results cannot be accurately given; but he considers it more powerful than any other manure.—*Southern Planter.*

MICHIGAN FARMER.

WARREN ISHAM, EDITOR.

PUBLISHED SEMI-MONTHLY—TERMS $1 IN ADVANCE—FIVE COPIES FOR $4.

The Spirit of Reform.

The spirit of reform is abroad in the land We live in an age of light, of discovery, and of progress. In the arts, in the sciences, in every department of human industry, and in every field of human thought, there is a waking up as from the slumber of ages, only to gaze with a bewildering stare, upon the wonderful things which the day dawn is disclosing to the view. And in no department, is this great characteristic of the age more manifest, than in that of agriculture. The dark ages of agriculture are passing away—its long right of ignorance and superstition is drawing to a close, and the sun of science is already flinging its rays across the pathway of the farmer, and learning him many new and useful lessons.

But it is greatly to be deplored, that many farmers, are still so wrapped up in ignorance and prejudice, that though the light is shinning all around them, and leading others into new and profitable applications of the resources at their command, it is of little use to them. They do not see, because they will not, and they will not because they love darkness rather than light, and that because it has been their chosen element so long, that their vision, like that of the owl, has become so accustomed to it, that the ligh of day is painful to it. Upon this class of farmers, the light must be let in by degrees, as they are able to bear it. Aud it devolves upon the favored ones, those who are enjoying the light and rejoice in it, to perform this kind office. And it is an office which they owe to the ignorant and prejudiced around them, and one which they are under sacred obligation to discharge. Let them remember the days of their own ignorance, and count up the value of the boon which they have so freely received ; let them become thouroughly imbued with the spirit of reform to which they themselves are so greatly indebted, and they will not long stand in cold and selfish indifference, while so many around them are still groping in darkness and see no light. The mere luxury of making an addition to the stock of human happiness, one would think, should be motive enough.

We want to make every reader of the Farmer a sort of missionary in this cause. And how can they do better service, than to put the Michigan Farmer into the hands of all such persons ? We have heard of a great number of instances in which prejudices have thus been overcome. We number many persons on our list, whose names have thus been obtained, and who would not now consent to be without the Farmer if they had to pay double the price.

Let all the patrons of the Farmer then, who desire to see the improvements which we propose in our prospectus, enter the field in earnest, and as the result, they will have a paper which, to them will be of far more value, than one printed in another state can be.

A word more to the friends of the Farmer.

There are many intelligent farmers in our state, who have always taken an agricultural paper from the East, perhaps one published in the state they came from, and who know nothing about the agricultural paper of their own state, its merits or demerits. There is neither ignorance nor prejudice in these persons, to be overcome, and all that is necessary, in most instances, to secure their patronage to their own state agricultural paper, is to put it into their hands, and let them compare it with their papers from the East. We have almost uniformly found, that where this has been done, preference has been given to the Michigan Farmer. We have no desire to crowd out Eastern papers, any further than they stand in way of our own, but we hold it to be the duty of every friend of agricultural reform in our young and rising state, to patronize *first*, their own state agricultural paper, and then, as many more as he can.

We hope therefore, that pains will be taken to put the Michigan Farmer into the hands of all such persons, and to them we make our appeal, whether, in our efforts to give them a paper adapted to the wants and circumstances of our own state, we are not entitled to their patronage.

As will be seen by our prospectes, we design that our next volume shall not be inferior in any respect, even in *cheapness*, to any agricultural paper in the land, *provided we are snstained.*

☞The weather for some time past has been unfavorable for putting in wheat, and we learn that farmers have thns been put back in seeding.

Origin of the Soil &c.

The idea that a great portion of the soil derives its origin from solid rocks, may, after all we have said about it, be a poser to some. But can you not conceive of a fragment of a rock so small as to be invisible to the naked eye? And can you not conceive of another piece of that same rock, a little bigger, another little bigger still—perhaps just big enough to emerge into the region of visibility? And can you not go on in the ascending scale, until you arrive in your conceptions at a piece as big as a pin head, and continue your progress, until you mount up to one the size of a pea, and then to one as large as a hickory nut, and so on? Well then, can you not conceive, that the ingredients of which these little bits of rock, are composed, may all be purchased in a drug shop, the only difference being, that in the one case, they exist in their original state of combination, and in the other, in a state of decomposition, or of re-composition? As we find them in the shops, they exist, for the most part, either in a state of solution already, or else in a state in which they are capable of being dissolved in water or other liquids. As they exist in the soil, the process of solution through the agency of air and moisture, is necessarily very slow.

If, however, the requisite agencies could be brought to bear, the process of decomposition in the soil, might be hastened to an indefinite extent. Of this some conception may be formed from the fact, that a patent has recently been taken out for an invention by means of which the potash in felspar rock, may be extracted for agricultural and other purposes. Felspar is one of the three mineral substances which constitute granite, and contains different proportions of potash, but averaging about fifteen per cent. The process consists in the application of chemical agencies, as sulphuric acid &c. It is a wise arrangement of providence, however, that the mineral ingredients of the soil are not, to any considerable extent, subjected to the action of these powerful agencies, as their solution would be effected at too rapid a rate, for the purposes of vegetable nutrition.

To help your conceptions on this subject, suppose yon take a piece of granite, one of the hardest of all rocks, and subject it to intense heat, and while in this state, pour water upon it, and you will find, that you have reduced it to powder, and prepared it for incorporation in the soil, subject to the same laws of decomposition through the influence of air and moisture, as other portions of the soil, which have been derived from the same source.

And what child is not familiar with the fact, that solid limestone is reduced to powder by being subjected to the heat of the kiln and exposed to the action of the atmosphere? Previous to being heated the solid rock is simply carbonate of lime. By the action of heat, the carbonic acid is liberated and driven off, leaving the lime in a state to be incorporated with the soil, as a fertilizing element.

And who does not know, that gypsum, (sulphate of lime) as it is found in its native bed, exists in the form of rock, and can only be made available to the purposes of vegetable nutrition, to any considerable extent, by being subjected to a process of pulverization? In this case, however, the change is simply physical, the chemical change taking place after its application to the soil.

Well then, if man can devise so many ways of effecting the decomposition of rocks, and reducing them to a state in which, as an integral portion of the soil, they may become food for the growing plant, think you, that nature has no way of her own to effect the same object? Indeed she has, and a far more excellent way than any of man's devising. To be sure, we see none of that hurry and bustle about her, which are so conspicuous in the operations of man. She goes to work in her own way, and in accordance with her own laws, brings about the mighty result—deliberately indeed, but in a far better manner, than could be done by the hasty process of artificial appliances.

In Michigan, the mineral properties of the soil, or rather of the subsoil, are about the same at the depth of fifteen, twenty, thirty, and even forty feet, or till you reach the solid rock, as they are near the surface, insomuch that when thrown out from a great depth in digging wells, they will, after being exposed for a time, to the action of air and moisture, produce about as well as the original surface soil. And there is no reason why it should not be so, as those elements, at that depth, resulted from the decomposition of the same parent rock, unless we should find a difficulty in accounting for the fact, that a sufficient supply of organic matter should

be absorbed from the atmosphere, to make those elements available.

In the light of the above, we see the reason why stones in a cultivated field, are actually a benefit to the soil. It is rather a popular opinion, that they are, in some way a benefit, but how they produce their beneficial effects, does not seem to be so well understood. We have heard persons ascribe the effect to their power of attracting moisture. But they undoubtedly cause more evaporation of moisture than they attract, by reason of the heat which they absorb and retain, which heat, by the way, may be and doubtless is, to some extent, beneficial to the soil. But the main benefit to the soil from the presence of stones, results undoubtedly from their decomposition, by which means its mineral elements, are, to some extent, constantly replenished. Through the action of the carbonic acid, and the ammonia which descends in rain water, all stones are constantly giving up a portion (small though it may be) of their mineral elements, and so far they may be considered a part and parcel of the soil itself. They exert precisely the same agency in the economy of vegetable nutrition, as the invissible fragment of a rock above spoken of does, only, in proportion to bulk, it is, of course, far less,—less in proportion as the comparative area of the surface exposed, is less; and less too in proportion as their exposure to moisture is less. Stones, however, may be so plentiful in a field, that the removal of a portion of them would do less injury, than their presence would harm.

☞At the late exhibition of the Detroit Horticultural Society, (of which a brief account is given on another page,) there were apples which were said to weigh twenty-four ounces, and pears to measure twelve inches in circumference. There was a pumkin nearly the size of a half barrel, and a cabbage head almost as large. There were also beets of enormous dimensions, and gourds, mirabile dictu!

☞Among the diplomas granted at the late Fair at Buffalo, was one to Wm. Blake, of Akron, Ohio, for mineral paint, which is fire proof and forms a covering for roofs equal to slate, the same which has been repeatedly described in our columns.

☞If the date of the Farmer, (the 1st and 15th of each month) falls on the sabbath, it is not to be taken for granted, that the paper is printed on that day. Our intention was to have the dates altered, when such a contingency occured.

Another Reply to Emeline.

Just at the last moment, we received the following communication, for which we thank the author, and which we commend to the attention, not of Emeline only, but of all who have any thing to do with the manufacture of butter. It is amazing, that so little attention has been paid to this subject hitherto. So very low has been the standard of butter making among us, that the very few, scattered here and there, who have been in the habit of making good butter for market, have found no diffculty in obtaining extra prices, and all that they can make, is generally pre-engaged by particular families. Most of the butter brought to market, is utterly unfit for table use, and much of it absolutely loathsome, both to the sight and the taste, scarcely fit to be set before a decent litter of pigs. We need a revolution in butter making, and must have it, or we are ruined as a people, so far as the enjoyment of this luxury is concerned; and, our word for it, if the directions of A. C. H. are followed out, we shall have it.

Nor is this a matter of small moment. Nothing is more essential to the enjoyments of the table, than nice, clean, sweet, richly flavored butter. With such butter, we may calculate with tolerable assurance, that every thing else will be good, whereas with bad butter nothing is good. What A. C. H. says about beef steak gravy, is true to the letter. That is one of the ways our hotel keepers contrive to smuggle their putrid butter down the throats of their customers. To see a fine piece of steak swimming in gravy, as you approach the table, is certainly very tempting, and then, before you get fairly seated, to have your olfactories saluted by the affluvia which rises from the rotten mass, is equally provoking. And would, that it could be said, that this practice was confined to our public houses, and that rancid butter was used for no other purpose than for gravy. Better, far better, to set a table without any butter at all, than with so offensive an article—far better to eat your steak in its own native juice, with the simple addition of salt, than to spoil it in this manner. There is no more reason why putrid butter should be eaten, than putrid beef, and no more necessity for it.

But we took up our pen simply to introduce to the notice of Emeline and all who are interested in the subject (and who is not? the communition which follows, but finding ourselves in the

midst of so *tasteful* a subject, we could not well resist the temptation to indulgence.

For the Michigan Farmer.

On Butter Making.

TROY, Michigan, September, 27, 1848.

MR. ISHAM, DEAR SIR :—I offer a few remarks upon butter making, which if you think worthy of notice in your paper, you are at liberty to insert. To lovers of butter, no doubt an improvement in the quality of the article offered in our markets, would be highly satisfactory. If these remarks shall have that tendency, the principal object in offering them will be accomplished. It is also hoped, that your correspondent from Little Prairie Ronde may receive some new hints. Good pasture is the best and most natural food for milch cows. They should have plenty of it, that they may fill themselves and have time for rest. It is also necessary that they should have pure water, and at all times accessible. Salt should be given two or three times per week. This is necessary for the health of the animal, as well as to make the *cream change to butter.* Cows should be milked regularly twice a day, and as near the same hour as possible, and by the same person, with proper care to "milk clean." If it is desired to make butter through the winter, cows should be housed, or at least, have a warm yard, with an open shed for shelter, during storms. Then with proper attention to their food and regularity in feeding, milking &c, butter can be made in cold weather nearly as good as in September. All animals, when fed regularly and with proper care for warmth and cleanliness, reqnire less food than when neglected.

To make cows give milk through the winter, and of good quality to make butter, they should have plenty of good English hay, and buckwheat and oats, mixed in equal parts, from 3 to 4 quarts each cow, twice per day. If this cannot readily be obtained, *bran* and *shorts* are the best substitute. To make the butter yellow, and to make the cream rise, and the "butter come quick," it is necessary to scald the milk immediately after straining, and set it in pans in a pantry, where light is admitted, and where the temperature is as near 60 degrees as possible. It may fall below that during the night, but should not freeze. All the utensils used in making butter should be kept perfectly sweet. This is highly important. I have known persons to churn half a day, on some cream without effect, when a little saleratus put into the churn, has brought it in ten minutes: sometimes a little salt will have the same effect, but the butter is always inferior, showing the want of care and attention to little particulars, which is indispensable, in order to make good butter. In warm weather, churning should be performed at least 3 times per week, and the milk may be set in a clean dry cellar, where light and air are admitted. After the first of September it will generally do better up cellar. The pans should be scalded and set in the sun a few hours every day. In warm weather, the milk should not stand over about twenty-four hours; in cool weather perhaps forty-eight hours.

With attention to the above particulars, it is believed, that butter may be made easily, and at least palatable, which is more than can be said of the butter frequently set before us on public tables, to say nothing of private ones. And who, I would ask, that is acquainted with the luxury of good, yellow, delicious butter, has not had his patience tried, by having, at a public table, set before him, a fine beef steak perhaps, covered over with a profusion of gravy, made from rancid butter, the smell of which was enough to lose a man his appetite?

I perhaps ought to remark, that to have butter keep well, it is necessary that all the buttermilk should be extracted, and that it should be salted with fine salt. Ground rock salt is the best, but when that cannot be had, fine bag salt will answer; but the ordinary barrel salt, if used, should be pounded fine. Butter should be worked over three or four times, in a wooden bowl, with a wooden butter ladle. This is better than to work it with the hands. Then, if you wish to keep it any length of time, put it down in kegs, and head it up tight. The layers of butter should be about two inches thick. Sprinkle a little salt between every layer, until the keg is full, and then head it up tight; place these kegs in a barrrel or hogshead, make a strong brine and pour over them until all are covered, head up the cask, and it will keep for years perfectly sweet. The object of this is to exclude the air entirely, and if it be done to butter well put up, it will keep any length of time.

Respectively yours, A. C. H.

☞See new advertisements on last page.

Horticultural.

The monthly exhibition of the Detroit Horticultural Society, which came off on Tuesday and Wednesday last, was altogether a fine affair, far surpassing every previous exhibition of the season.

The flowers consisted almost entirely of that general favorite, and caressed one, of the floral family, the Dahlia; but of that there was such a profusion, such a congregated variety, as we had never seen before, all bearing the family likeness, and yet exhibiting such an endless diversity of aspect, that the effect was scarcely the less charming to the eye, than if every one of them had belonged to a distinct species.

In the department of culinary vegetables, there was quite a respectable display, several of them being quite on the mammoth order.

But it was the display of fruits which constituted the leading attraction of the exhibition. Of apples there were 185 different parcels, of peaches 44, of pears 30, of quinces 13, of plums 4, and of grapes 25. The apples were of the choicest varieties, of every gradation of size, from the tinniest dwarf, to those of the largest class, embracing a multitude of distinct and choice varieties. We noticed a twenty ounce pippin, which true to its name, weighed exactly twenty ounces. The peaches were of a high order, for size, and as we can readily imagine, for flavor also. And so were the pears, among which were the delicious Virgalieu, and one or two varieties of superb winter pears. The quinces were also above mediocrity, and some of them very large. The plums too, though out of season for presenting imposing varieties, showed well. The grapes were very tempting presenting their rich and beautiful clusters, of several distinct varieties, both native and foreign.

Altogether, the collection of fruits, has probably never been surpassed, nor indeed equalled, for excellence, by any previous one in the state.

The contributors from abroad, to whom the exhibition was indebted for much of its interest, were Messrs. Dougal of Amherstburgh, Canada, Lay of Ypsilanti, Travers of Mount Clemens, Allen of Pontiac, Hubbard of Troy, Bronson and Whitehead of Waterford, and H R. Williams of Constantine.

We have no room for the list of premiums in detail, and append simply the names of those who bore off the highest honors of the exhibition in the fruit line. Premiums were awarded.

For best collection of apples, to E. D. Lay.
For best single variety of apples, to J. Dougal.
For best collection of peaches, to J. Dougal.
For best single variety of peaches Mrs. Gillet
For best collection of pears, to J. Dougal.
For best single variety of pears, J. J. Travers.
For best collection of quinces, to J. Allen.
For best collection of plums, to J. Dougal.
For best collection of foreign grape J. Dougal.
For best col. of native grape C. C. Trowbridge.
For best single variety do, A. C. Hubbard.
Visitors uncommonly numerous.

Reply to Emeline.

The following communication seems to meet the difficulties of Emeline exactly. We trust the remedy will prove satisfactory. It may help her faith in it to know that it comes from the President of the Detroit Horticultural Society with his best respects.

Will Emeline forward the results of the application of this remedy, as requested? Should any other of our fair readers have difficulties, we hope they will state them through the Farmer. Only think what immense benefits must result, not only to Emeline, but to the whole community from the reply to her inquiries, if the remedy is anything like what it is recommended to be, and it may be tested without any sacrifice or risk.

For the Michigan Farmer.

Mr. Isham :—Please tell Emeline, of Little Prairie Ronde, that she is not alone in finding it difficult to make butter for a month or two past. But, for one gallon of cream, if she will dissolve two teaspoons full of saleratus, in half a tea cup of water, and after churning her cream ten or fifteen minutes, turn the saleratus into the churn, after a few minutes more churning, the butter will come; and not only come, but the yield will be one third more, and of better flavor and color than without the saleratus. A lady who has experienced as much difficulty, and sacrifice of time, in making butter this summer as Emeline has, told me that after trying several experiments and none of them producing the desired effect, she tried saleratus, and the result was as stated above. She continues to use it and always with the same result. Will Emeline please try it and let us know with what success?

J. C. H.

Detroit, September 19th, 1848.

For the Michigan Farmer.

The Potatoe Rot, Grub-Lifter, Summer Fallow, Agricultural Chemistry.

Mr. Isham:—I have thought I would write once more, as I have some things to say about the potatoe rot and some other matters.

I have observed that the potatoe rot commences in the tops, and this malady is not confined to potatoes alone, but may be observed on melon vines, hops, bushes and trees, particularly on young hickory, and basswood, and I have been told on apple trees, so that the opinion that the potatoe has been too highly cultivated must fall. What produces the potatoe rot, I do not know, but I think it must be something in the atmosphere, or it must be produced by some insect. My potatoes being late, were not affected till after some of my neighbors were quite bad, and I have watched them pretty close. First a leaf or two would crisp up, turn black, and die, and so on till all the leaves were dead, and then the stalk. The potatoes will rot before they are half grown, and continue to rot sometimes until taken out of the hole in the spring. Sometimes it will cease only after all hopes are gone, which is the case here at present. I planted in small patches here and there, so that (I might by all means get some,) and my potatoes are nearly ripe, and although but few in a hill, are quite good, and if they rot no more I shall have enough for my own use.

GRUB LIFTER.

I have got up what I call a grub lifter, that goes it with a rush. The public are welcome to the pattern. First, get a good tough log, two feet through, and three feet long, beat a mortice half way through, four by six inches square, frame in a sweep four feet long, get a good strong chain, four feet long, with one large hook to hook on to the grub or stump, and hook the other end around the sweep close to the log, place the log close to the stump or grub, to be drawn, and hitch over on the backside, with the sweep nearly perpendicular, hitch a good yoke of oxen to the end of the sweep, and bid them go. With such a purchase, the log acting as a fulcrum, it must come. Two yoke may be put on if necessary, or another mortice may be beat on the backside, so that two men can lift more with a good long handspike, than a yoke of oxen can draw.

SUMMER FALLOWS.

A word about summer fallows. First contrive to have the field you intend to fallow by itself, so that you can pasture it and keep it clean. Plow early, and plow well, and if your ground is sufficiently clear of stones and roots, use a cultivator about once a month, till seeding time, then cultivate in your ground. By this means your ground will be warmer and more fertile, than if plowed up just before seeding. If you cannot use the cultivator, use the drag freely, and plow sometime before you sow. Pass over it with the drag before you sow, and drag both ways after sowing; cut and clean out furrows through all the low places, and do it all as well as you can, and be particular to sow good clean seed.

AGRICULTURAL CHEMISTRY.

One thing more and I have done, and I do not know much about that, viz, the application of chemistry to agriculture. I believe it would be of vast profit to the farmer to understand enough of chemistry to be able to analyize his own soil and manures, and such things as are immediately connected with his business, but as this is not the case, the farmers would do well to employ a competent person, to examine the different soils and subsoils on their farms, so that they may know what may be lacking to produce good crops, or what may be in excess and apply the proper remedy.*

I have written more lengthy than I anticipated, and after all, it may not be worth the examination or postage, but I will send it and leave it at your disposal, with my respects and best wishes, for your prosperity and the improvement of Agriculture in Michigan.

Russell Cobb.

* It is indeed desirable, in the highest degree, that the farmer should possess the knowledge and the facilities requisite to enable him to perform these processes for himself. Then indeed would he be the monarch, if not of all he surveyed, at least, of his own domain, for he would in a manner, have all the elements at his command, and could press them into service at his pleasure—a consummation devoutly to be wished and one which we have no doubt will some day be ushered in.

And when shall that day arrive? Not until the rudiments of agricultural science shall be taught in every school district in the commonwealth, and thus be rendered accessible to every farmer's boy, whether he be rich or poor. Not until teachers qualified for this responsible task shall be educated, in part, or in whole, at the public expense.

And how could a portion of our public domain be better disposed of than for purposes of this kind? Every other interest must be looked after and cared for, but that of agriculture; the

most important of all. When shall this great, leading branch of American industry, receive its due share of attention? Ed.

NEW INVENTIONS.

Timber Preserative--Payne's Patent.

This is is an English patent secured by a Mr. Payne, to which we have before alluded. The following particulars are from a recent English paper in which the writer says: The wood is by its application, rendered not only perfectly insensible to the dry rot—if we may so express ourselves—but that it is rendered uninflamable; and farther that it becomes seasoned in a comparatively short space of time.

The process under notice consists in introducing, by means of exhaustion and pressure, such metallic and earthy solutions as shall, by single and double decomposition, form new and insoluble salts throughout the interstices of the wood. For ordinary purposes, in the first instance, a solution of sulphate of iron, and then one of muriate of lime, are injected; these by double decomposition, form sulphate of lime, insoluble, and muriate of iron. When the timber is required uninflammable, alum, as well as iron is injected. When timber is required proof against ravages of worms, sulphuret of barytes, and sulphate of iron, or of alumina—both or either of the latter—are injected.

The great advantages consist in preserving timber from wet or dry rot, ravages of worms and combustion, it also renders wood as much seasoned as, under ordinary circumstances, it would be in as many years.

Another most valuable property attending the process, is that of rendering the inferior, and consequently cheap, and home growth wood equal in strength and durability to the best description; and not only is beech rendered equal to oak, but made to partake of metallic qualities even more lasting than the timber which at present exceeds it threefold in price. Wood so prepared, even deal, becomes susceptible of the finest polish; and moreover, by the use of certain solutions, can be stained throughout with every variety of color. The process has been in operation five years, and nothing proves its efficacy more completely, than that those who used it, in its early stage, are now using it on a very extensive scale.—*Farmer and Mechanic.*

Patent Air Seat Saddle.—At the recent exhibition of the Agricultural Society of York, (Eng.) Mr. Taylor, of Banbury, Oxfordshire, exhibited beautiful specimens of improved harness, among which was a patent inflated air-saddle, for riding, with a moveable pannel, invented, improved, and manufactured by the exhibitor. The patent air-saddle is an excellent article for ladies' and gentlemen's riding; and to the invalid it will be invaluable, as the elasticity prevents the shaking which is frequently occasioned by the rough action of the horse, and is by experienced riders allowed to be the easiest ever invented, both to horse and rider; and which does not, as is suggested by many persons act as a spring saddle, or tend to shift the rider from his seat. A hard or soft seat may be used as required.—*Farmer and Mechanic.*

Improved Bedstead.—We learn from the "Blue Hens' Chicken" that Mr. John Jebo, a cabinet maker of Wilmington, (Del.) has made a decided improvement in the article bedstead. Instead of being screwd up at the head and foot it is made fast; thereby avoiding the usual harbor for bugs. Half way between the head and foot, the side pieces are sawed in two, and a strong hinge attached, by screws, so that when you wish to remove the bedstead from one room to another, all you need do is, to raise it in the middle, by means of the hinge, and it folds the head and foot together, like a cot, and thus you can, at once, carry it through a door, or up stairs without the trouble of unscrewing the head and foot.—*Farmer and Mechanic.*

Prevention of Steam Boiler Explosions.—We learn from the London Mining Journal that Mr. Joseph Spencer of the Bilston Iron Foundry, England, has invented a steam whistle to be attached to stationary boilers, to give notice when the water was getting low. It is very simple, and, we should say, effective and secure; consisting of a common steam whistle, placed on the top of the boiler. The passage of the steam to which is closed *inside* the boiler by a valve, opening downwards, having an open link attached, and kept close by a balance lever. The float lever works in this open link, and as the water gets low it pulls down the valve, and admits the steam to the whistle immediately giving notice to the attendants. The works being all inside cannot be tampered with.—*Farmer and Mechanic.*

Patent Saw Mill.—Letters patent have been granted for a saw mill possessing great perfection of parts and combinations and great versatility of action. It is adapted to ordinary rectilinear sawing, to the sawing of curves, regular or irregular, and to the sawing of warped surfaces, such as are used in ship building, and elsewhere. It will be readily perceived that machinery which is principally self-acting and capable of such a variety of duties, cannot be intelligibly described in this paper.—*Patent Office Report.*

We yesterday, says the Baltimore Clipper, examined a beautiful boot, made by Mr. Robt. T. Harman, to which he has attached what is called the Revolving Heel, an invention of his own. By this invention, it is only necessary to give the screw a slight turn with the hand, and the side of the heel not worn off is made to take the place of the one which is gone.—*Far. & Mec.*

XUM

GENERAL INTELLIGENCE.

Later from Europe.—The price of breadstuffs has fallen, probably in consequence of the improvement in the state of the grain crops, and the better condition, in Ireland, of the potatoe crop.

Ireland.—With the exception of the gratifying announcement that the weather continues fine and dry, and that the agricultural reports from the Provinces are becoming more favorable under the influence of the recent change from incessant rains to a bright sun, there is no intelligence of the least interest. Irish excitement is invariably followed by a lull, but in the present instance the relapse has been succeeded by a downright lethargy or prostration of the whole system.

The accounts of the harvest prospects in the counties of Cork, Tipperary and the North generally are highly satisfactory, as showing a gradual improvement in the appearance of all the crops, and the belief gains ground, that a large portion of the potatoes will be available for consumption.

Prince Eugene of Savoy, has decreed the entire expulsion of the Jesuits from the Sardinian dominions and confiscated their property for the establishment of National Colleges.

Russia.—It is reported that the Russian army in the Caucasus has been cut to pieces by the Chieftain Schamyl.

Gold Fever in California.

Montery, Upper California, July 2, 1848.

The store ship Southampton leaves for Mazatlan in the morning, and the hour is late; still I must throw on paper a few sentences to you. Since my last, a gold mine has been sprung up here. It has been discovered that the sands which border the American Fork and Feather River, branches of the Sacramento, are full of particles of gold, resembling in shape squirrel shot flattened out. It is got by washing in any vessel, from a tea-saucer to a warming pan. A single person will gather by this process, from one to two ounces a day—and some have gone as high as a hundred dollars worth. Two thousand whites and as many indians are now engaged in washing the sand. All labor of every other kind has stopped except a little farming. Mechanics, doctors, lawyers, merchants, sailors and soldiers, have all gone in mass to the gold region. Only the women remain, and they will it is expected, start soon. Their cradles will answer admirably to wash out gold in, and the little fellows in the mean time must amuse themselves with the ingots which their mothers dig.

The excitement which this discovery has produced, is most intense. People stop each other in the streets, feel the pulse, and see how the gold fever, as it is called, beats. Talk to a laborer about hiring him for fifty dollars a month and he will turn up his nose at you. Offer him ten doltars a day and he will tell you he is bound to Feather river. One man who resides next door to me, gathered five hundred dollars worth in six days. He has one lump which weighs over an ounce. A trough such as you feed pigs in, will bring in the gold region fifty dollars. Put a piece of sheet iron punched with holes on it, and it will bring over a hundred. My friend J. R. paid sixteen dollars for a little basket, and his companion gave twenty for a chamber pot,—all to wash out gold in. It beats all the dreams of romance, and all the golden marvels of the wand of Midas. And yet it is true, if there be truth in man where gold is concerned.

Sailors all run from our ships, and soldiers from our camps, to search the gold region.—The accounts are wonderful. Steady working men average $10 per day, though many times a hundred dollars has been collected in a day by one man. Hundreds of people are there. Montery, Santa Cruz, San Jose and San Francisco are deserted. It is about five days good travel from here to the district. There flour is worth $32 per barrel; 15 lbs. of Boston crackers in tin boxes, $10 a box; a cotton shirt $10; boards $500 per 1000 feet. A carpenter can get $100 per day. Mr. L. paid for a common cradle trough, 12 feet by 3 wide, to wash gold earth in $150. Less than a day's work to make it. So things were there ten days since. How long the bubble will last, it is impossible to say. All that L. says about it, is wonderful.

Loss of the Goliath.—The Propellor Goliath, bound to the Saut with provisions, lumber &c. was seen during the storm, one day last week, dismasted and on fire, near the shore, at the mouth of Saginaw Bay, soon after which a terrible explosion was heard, and fragments of the wreck were seen flying in the air. There was a large quantity of powder in the hold. The number of persons on board, was eighteen; among them a son of Gen. Schwartz, and a carpenter from this city by the name of Dodge.

Candidates.—A. W. Buel, Dem. Geo. C. Bates, Whig, and C. N. Ormsby, Free Soil, have been nominated for congress in this (the 1st) District.

DETROIT PRICE CURRENT.

Flour, bbl.	$4 37½	a	$4 44	Salt,	$1 37	a	$1 44
Corn, bus.		a	50	Butter,		a	12½
Oats,		a	22	Eggs, doz.			10
Rye,		a	42	Hides, lb.	3	a	6½
Barley,	56	a		Wheat, bus.			85
Hogs, 100 lbs.	3 00	a	3 50	Hams, lb.	6	a	6½
Apples, bush	25	a	0 5	Onions, bu.	41	a	50
Potatoes,			41	Cranberries,		a	1 25
Hay, ton,	8 00	a	10 00	Buckwheat 100 lbs.		1	50
Wool, lb.	14	a	28	Indian meal, "		1	00
Peas, bu,		a	75	Beef, do	3 50	a	4 50
Beans,	75	a	80	Lard, lb. retail,			7
Beef, bbl.	6 00	a	7 00	Honey.			10
Pork,	10 50	a	11 50	Apples, dried,		1	00
White fish,	6 00	a	7 00	Peaches, do		a	2 00
Trout,	5 50	a	6 50	Clover seed, bu.		4	50
Cod fish, lb.	5	a	5¾	Herd's grass do do		1	00
Cheese,	6	a	8	Flax do			75
Wood, cord,	2 25	a	2 50	Lime, " bbl			75

PROSPECTUS
Of the Michigan Farmer.
VOLUME VII.

Proposed Enlargement.

The seventh volume of the Michigan Farmer will commence on the first of January next. We propose, by the addition of another column to each page, to issue it semi-monthly, in a quarto form, embellished with cuts, and on superior paper, which will give it a place among the largest and cheapest agricultural Journals in the land, the price remaining the same as at present.

But these improvements cannot be made, unless our subscription list is at least doubled, and it is on condition that such an accession is made to it, that they are proposed. It is with the friends of the paper to say whether it *shall be done.*

We might fill pages with testimonials of the estimation in which the Farmer is held by our brethren of the press, both at the East and the West, and what would be better still, we could present our best agricultural exchanges from the East, (except one or two which circulate pretty freely in Michigan.) occupied, to a great extent, with important articles copied from our columns, no agricultural paper in the Union being more copied from than the Michigan Farmer. But this is unnecessary. Our readers know what the Farmer is, and we are content, that they should judge for themselves.

Say not that it is too soon to begin; it is not too soon. Last year we did not get into the field until it was too late. Eastern publishers had stepped in before us, and we had to content ourselves, to great extent, with their leavings: and yet, though we have labored under this and various other disadvantages, we have been prospered beyond the most sanguine expectations of our friends. What then may we not accomplish with a fair and open field before us? Will the friends of the Farmer then, who wish to see their own agricultural paper taking rank, in amount of matter, in embellishment, and in every respect, with the best in the land, see to it, that its claims are seasonably presented to the intelligent and enterprising farmers of Michigan, and not to the farmers only, but to the mechanic, and the professional man, to every friend of science and of art? And let them begin now, neglecting no opportunity from this hour, to press home upon their neighbors and friends, the importance of sustaining an agricultural paper of their own—one adapted to their necessities, to the peculiarities of their soil and climate, and to the circumstances of a new country, and one which shall become the pride of our young and rising commonwealth.

The usual terms (see terms) will be allowed for procuring names, be the number more or less. None but new names are wanted, it being taken for granted, that the old ones will continue, unless notice be given to the contrary.

We want returns by the first or at the latest by the fifteenth of December, that we may make calculations accordingly. Every thing will depend upon the efforts of the friends of the paper in procuring subscribers.

Terms the same as at present.

WARREN ISHAM.

Detroit, October 1st, 1848.

Errata.—In our number of September 1st, the following typographical errors in Mr. Duffield's address, were not corrected until a few impressions were worked off. In those impressions, in the enumeration of select varieties of the peach, page 260, instead of Celbig's cling, Old Havington, and Oroup, read *Selby's cling*, *Old Newington*, and *Orange*,, and instead of 'sand barren,' read '*sand basin.*'

To our Subscibers.—Those of our subscribers, who are in arrears from the commencement of the present volume of the Farmer, and from whom there is now due one dollar and seventy-five cents, shall be credited for two years, (for the present volume and the next) if they will send us two dollars within a reasonable time. They may remit through the postmasters, or through the mail, for a time, *at our risk and expense.*

Agents Wanted.—Wanted a number of intelligent and enterprising men, who can come well recommended, to act as travelling agents for the Michigan Farmer. Good terms will be given.

TERMS.—The Michigan Farmer is published at Detroit, twice a month, by Warren Isham, at one dollar a year in advance—after three months $1 25—after six months $1 50—after nine months $1 75. No subscription taken for less than one year, nor discontinued till all arrerages are paid. To clubs, five copies for four dollars.

Office, on King's corner, third story.

Wm. R. Prince & Co. sole proprietors of the great Original Linnean gardens and nurseries, at Flushing New York, offer the largest collection of superior fruits and ornamental trees and plants to be found in America; and will transmit their *descriptive catalogues* to every post paid applicant. The trees are of large size and will come promptly into bearing, and are such as are called "extra size" at the West, and sold there at extra prices. A wholesale catalogue for nurseries, will also be sent to venders. The expense of transportation is now moderate, and orders sent per mail, will receive prompt attention, and a transportation line, receipt forwarded to the purchaser. Cash or a reference in some city to be sent with the order.

N. B. We must caution the public against a spurious use of our name and title, by a man named Winter, whose advertisements are calculated to mislead many.

September 18th 1848.

Detroit Nursery and Garden. The subscriber would call the attention of those who wish to purchase fruit trees this fall, to his nursery, where they can be supplied with fine, thrifty trees, of the best varieties of apple, pear, peach, cherry, plum, nectarine and apricot, also many kinds of ornamental trees and shrubbery.

Orders may be left at the nursery on the south side of Chicago Road, one mile from the City Hall, or at the store of John Palmer & Co. No. 108 Jefferson Avenue, Detroit.

September 20th, 1848. J. C. HOLMES.

FRUIT & ORNAMENTAL TREES, SHRUBS, VINES, PLANTS ROSES, &c., &c., &c. The subscriber offers for sale a large assortment of fruit trees, comprising most of the leading varieties of apples, pears, plums, cherries, peaches, nectarines, apricots, grapes, &c. together with a large and general assortment of ornamental trees, shrubs and plants, including a splendid collection of the finest new roses and dahlias, which embrace the most beautiful in cultivation.

The green house contains a complete stock of the finest camelias, cacti, geraniums, fuschias, verbenas, lilies and most of the popular and beautiful plants that are usually cultivated; all at very low prices.

☞As the whole stock (which has been accumulating for the last 8 years) must be removed by the first of May, an opportunity is offered of obtaining trees and plants of large size, at very moderate prices.

WILLIAM ADAIR.
Michigan Garden, Detroit.

September 27, 1848.

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